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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,652	11/18/2003	Hiroshi Netsu	00862.023307	2520
5514	7590	06/28/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			FEGGINS, KRISTAL J	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	
			2861	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/714,652	NETSU ET AL.	
	Examiner	Art Unit	
	K. Feggins	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/22/04</u> . | 6) <input type="checkbox"/> Other: ____.                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US 2002/0075366 A1).

#### **Smith et al. discloses the following claimed limitations:**

\* regarding claim 1, a liquid reservoir/cartridge, 20/ apparatus comprising a storage/housing, 22/ which stores a liquid/ink/, a negative pressure introducing portion which introduces a negative pressure into said storage (para 0020-0028, figs 1-3);

\* a liquid intake portion which takes the liquid into said storage/housing, 22/ with the negative pressure introduced from said negative pressure introducing portion (para 0020-0028, figs 1-3);

\* a liquid reservoir/ink chamber, 36/ which is provided in said storage/22/ to hold the liquid stored in said storage (para 0020-0028, figs 1-3);

\* a liquid supply port which is provided to said storage to supply the liquid stored in said storage(para 0020-0028, figs 1-3);

\* a gas(air)/liquid separating member which transmits only a gas(air) therethrough, and negative pressure generating means for drawing air in said storage by suction to effect the negative pressure, wherein said liquid reservoir has a plurality of

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thin bodies provided at gaps from each other in said storage, so that the liquid in said storage is held by a capillary force generated by said thin bodies, (para 0020-0028, figs 1-3);

\* a liquid guide portion, which is set at a gap between one end of said liquid reservoir and an inner wall of said storage, is provided so that the capillary force in the vicinity of the liquid supply port is larger than that of said liquid reservoir (para 0020-0028, figs 1-3).

\* regarding claim 2, wherein said gas(air)/liquid separating member is provided to said negative pressure introducing portion or at a position corresponding to said negative pressure introducing portion (para 0020-0028, figs 1-3).

\* regarding claim 3, wherein the inner wall of said storage has a groove, at a position adjacent to said liquid introducing portion, which generates a capillary force larger than that of said liquid introducing portion (para 0020-0028, figs 1-3).

\* regarding claim 4, wherein the gaps among said thin bodies in said liquid reservoir gradually increase as the gaps are more distant from said liquid introducing portion (para 0020-0028, figs 1-3).

\* regarding claim 7, wherein said gas/liquid separating member is porous and subjected to a repellent treatment (para 0020-0028, figs 1-3).

\* regarding claim 8, wherein said gas/liquid separating member is a gas permeable film made of a porous material and subjected to a repellent treatment (para 0020-0028, figs 1-3).

\* regarding claim 9, wherein said gas/liquid separating member is a gas permeable film made of a porous resin material and subjected to a repellent treatment (para 0020-0028, figs 1-3).

\* regarding claim 10, a printer comprising a liquid reservoir apparatus, wherein the printer prints by discharging ink through a printhead (para 0020-0028, figs 1-3).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (20020075366 A1).

#### **Smith et al. disclose the following:**

\* wherein the gaps among said thin bodies in said liquid reservoir fall are sized to form a series of capillary channels or opening; and the size and number of capillaries

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are selected to allow air to enter the cartridge through the vent opening only when the interior pressure has been reduced below the desired negative pressure relative to the external environment.

**Smith et al. does not disclose the following:**

\* regarding claim 5, wherein the gaps among said thin bodies in said liquid reservoir fall within a range of 0.05 mm (inclusive) to 0.5 mm (inclusive).

\* regarding claim 6, wherein the capillary force of said liquid reservoir falls within a range of 30 Pa (inclusive) to 2,000 Pa (inclusive).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize gaps among said thin bodies in said liquid reservoir fall within a range of 0.05 mm to 0.5 mm, a capillary force of said liquid reservoir falls within a range of 30 Pa to 2,000 Pa and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art for the purpose of allowing air to enter the to enter the cartridge through the vent opening only when the interior pressure has been reduced below the desired negative pressure relative to the external environment and for maintaining a desired negative pressure in the cartridge. *In re Aller*, 105 USPQ 233.


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### **Communication With The USPTO**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 571-272-2254. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talbott Dave can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**K. FEGGINS**  
**PRIMARY EXAMINER**